

DO-577

FIELD SAMPLING REPORT

PERIODIC COMPLIANCE REPORT MONITORING

CERRO COPPER PRODUCTS COMPANY  
SAUGET PLANT  
SAUGET, ILLINOIS

Prepared By

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CHICAGO, ILLINOIS

AUGUST, 1990

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STATE OF ILLINOIS

CER 095209

CONFIDENTIAL 92-CV-204-WDS

## FOREWORD

The Periodic Compliance Report (PCR) monitoring involves various wastewater discharges associated with the Saugat Plant. The field activities related to the work for this reporting period included:

1. Preparation of Sampling Locations/Flow Monitoring Equipment
2. Preparation of Sample Bottles
3. Collection of Wastewater Samples
4. Collection of Flow Data
5. Sample Compositing
6. Record Keeping & Reporting

Activities 1 and 2 took place on August 27, 1990. Activities 3 and 4 were performed over a 24-hour period beginning the morning of August 27, 1990. Activity 5 took place one day after the 24-hour sampling period, and activity 6 was performed throughout.

This report presents the field and analytical results related to the PCR monitoring for all locations during the period described. Its purpose is to document data obtained and field observations made during the conduct of the effluent monitoring in response to the requirements of Administrative Order No. V-W-88-AO-01.

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**SECTION I**

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The wet well is approximately 12 feet deep with the sampling point approximately 4 feet from the bottom. Flow was monitored by means of a 90 degree V-notch weir bolted to the wall in front of the 12-inch pipe, and a portable continuous-recording flow meter. Samples were collected from the flow exiting the weir.

#### LOCATION 12C

Sampling Location 12C is the discharge from the East Outfall Lift Station located at the northeast corner of the Main Tube Mill Building (see Figure I-1). The flow discharging into the lift station constitutes all wastewater generated from plant operations North of Old Queeny Avenue. Monitoring at this location allows full quantification of the pollutant discharge via the East Outfall.

Flow was monitored by two continuous-recording flow meters. A turbine-type meter recorded flow in the 6-inch diameter line of the two pump discharge system. A doppler-type meter recorded the flow in the 24-inch discharge line of the three pump system which is primarily used for storm weather conditions. Samples were collected from the discharge of the lift station.

#### LOCATION 21A (Cerro West)

Sampling Location 21A is the inlet of the manhole at the west plant entrance located east of Illinois Route 3 (see Figure I-1). Monitoring at this location allows full quantification of discharges leaving the plant complex via the West Outfall. It includes all flow discharged from plant operations South of Old Queeny Avenue.

The manhole is approximately 12 feet deep with an 18-inch Leopold Lagco flume installed in an 18-inch diameter clay pipe. Samples were collected from the flume. No flow data were obtained because the permanent flow meter provided by the Village was not in operation at the time of sampling.

#### SAMPLING LOCATION 30 (COPPER MOLDING & CASTING TREATMENT PLANT)

Sampling Location 30 is the discharge from the Copper Molding and Casting Pretreatment system for the casting furnace air pollution scrubber blowdown. Periodic blowdown from the direct chill casting cooling tower system is fed, as makeup water, to the recycle tank in the casting furnace air pollution scrubber system for reuse and ultimate inclusion in the blowdown to the pretreatment system. A single grab sample was collected from the well-mixed treated contents of each of the two effluent storage tanks during discharge. The combined discharge from the two tanks is considered a batch.

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**SECTION II**

CER 095217

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TABLE II-1  
SAMPLE BOTTLES AND PRESERVATIVES

Analysis	Bottle		Preservation
	Type	Size	
VOA(1)	Clear glass Teflon lined cap	40 ml	Cool, 4°C
NVBN+NVA(2)	Clear glass Teflon lined cap	16 oz	Cool, 4°C
Metals (3)	Clear glass Teflon lined cap	8 & 16 oz	Nitric Acid to pH < 2
Oil & Grease	Clear glass Teflon lined cap	32 oz	Sulfuric Acid to pH < 2, Cool, 4°C
Total Phenols	Clear glass Teflon lined cap	16 oz	Sulfuric Acid to pH < 2, Cool, 4°C

Notes:

- (1) Volatile Organics Analysis - Method 624 of 40CFR136
- (2) Nonvolatile Base and Neutral Extractable Organics, and Nonvolatile Acid Extractable Organics - Method 625 of 40CFR136. Composite sample is kept in a amber glass, 80 oz teflon lined cap bottle.
- (3) Analysis includes total chromium, total copper, total lead, total nickel, and total zinc.

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**SECTION III**

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**TABLE III-1**  
**FLOW MEASUREMENT SUMMARY**

Run no.	Date	Station 3B			Station 3A			Station 9A		
		Totalizer Reading (gal)	Time	Volume volume (gal)	Totalizer Reading (10 gal)	Time	Volume volume (gal)	Totalizer Reading (gal)	Time	Volume volume (gal)
0	8/27	1213	0	--	1215	0	--	1207	0	--
1		1415	610	610	1421	386	3860	1406	721	721
2	1614	1760	1170	1620	1389	10030	1605	1516	795	
3	1820	2591	811	1830	1877	4880	1811	2645	1129	
4	2011	3049	458	2016	2193	3160	2005	3648	1003	
5		2215	3762	713	2221	3529	13360	2209	4755	1107
6	8/28	0016	4609	847	0024	4190	6610	0008	5882	1127
7		0211	5236	627	0215	4940	7500	0204	6982	1100
8		0414	6080	844	0421	6075	11350	0407	8150	1168
9		0615	6846	766	0619	6614	5390	0609	9062	912
10		0821	7853	1007	0826	7165	5510	0812	9685	623
11		1014	8360	507	1019	8318	11530	1009	10637	952
12		1222	8950	590	1234	8802	4840	1209	11441	804
Total Volume (gal)		8,950			88,020			11,441		
Average flow (gpd)		8,894			86,874			11,425		
					6.2			60.3		
								7.9		

III-2

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TABLE III-2  
PH AND TEMPERATURE DATA (1)

Station	3B			3A			2A			12C			21A		
	Date	Run	Time	PH (SU)	T (°F)										
8/27	2	1614	7.49	.88	1620	8.94	.94	1605	8.40	.90	1628	7.71	.87	1600	8.57
8/27	5	2215	7.77	.82	2221	8.92	102	2209	8.11	.88	2229	8.25	.87	2200	7.74
8/28	8	0414	7.96	.82	0421	9.00	100	0407	8.10	.85	0430	8.08	.85	0400	7.84
8/28	11	1014	8.10	.82	1019	9.15	.94	1009	8.41	.90	1028	7.98	.88	1000	7.81
Minimum			7.49	.82	8.92	.94		8.10	.85	7.71	85				
Maximum			8.10	.88	9.15	102		8.41	.90	8.25	88				

Notes:

(1) Temperature was measured at each site after collection of samples. PH was measured after all samples from all stations were collected.

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**SECTION IV**

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## METHOD SUMMARY

Except where noted, EAI employs the methods stated in the USEPA's current "Contract Laboratory Statement of work for Organics Analysis - Multi-Media Multi Concentration", Rev. 7/87.

### VOLATILES

For a solid, 5 g of sample is taken and surrogate compounds are added. For a water sample, a 5 ml aliquot is taken with surrogates added. An inert gas is bubbled through the sample in a specifically designed purging chamber at ambient temperature. The purgeables are transferred to the vapor phase where they are swept through a sorbent column and trapped. The sorbent column is heated and backflushed with the inert gas to desorb the purgeables onto a gas chromatographic column. The gas chromatograph is temperature programmed to separate the purgeables which are then detected with a mass spectrometer.

### ACIDS/BASE NEUTRALS

For a solid, a weighed amount of sample is mixed with anhydrous sodium sulfate, surrogates are added and the sample is extracted with 1:1 acetone/methylene chloride using an ultrasonic probe. The extract is then concentrated. For a water sample, a measured volume plus surrogates is serially extracted with methylene chloride at a pH greater than 11 and again at a pH less than 2, using a separatory funnel. The extracts are dried and concentrated. The extracts are injected onto a gas chromatographic column. The gas chromatograph is temperature programmed to separate the compounds which are then detected with a mass spectrometer.

### SURROGATES

Surrogate standards are deuterated compounds and/or select compounds which analytically mimic the response of certain analytes. A known concentration is added to the sample and the percent recovery calculated. This recovery acts as a barometer of the method efficiency for the individual sample matrix.

### SOLID SAMPLES

Results for solid samples are reported on a as received basis, unless noted otherwise.

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PAGE NO : 2  
REPORT NO : 40327A  
DATE : 09/27/90

## RESULTS OF ANALYSIS

LOG NUMBER	SAMPLE DESCRIPTION	TEST NAME	RESULTS OF ANALYSIS	UNITS OF EXPRESSION	METHOD NUMBER
1129821	3 (1-12) 8/28/90c	Chromium	0.094	ng Cr/l	218.1
		Copper	1.21	ng Cu/l	220.1
		Acid Extract (GCMS)	See Attach		625
		Base Neutral (GCMS)	See Attach		625
		Nickel	<0.05	ng Ni/l	249.1
		Lead (GTF)	0.074	ng Pb/l	239.2
		Zinc	0.094	ng Zn/l	289.1
1129622	8 (1-12) 8/28/90c	Chromium	0.089	ng Cr/l	218.1
		Copper	1.42	ng Cu/l	220.1
		Acid Extract (GCMS)	See Attach		625
		Base Neutral (GCMS)	See Attach		625
		Nickel	5.23	ng Ni/l	249.1
		Lead (GTF)	0.63	ng Pb/l	239.2
		Zinc	3.53	ng Zn/l	289.1
1129623	9 (1-12) 8/28/90c	Chromium	0.283	ng Cr/l	218.1
		Copper	1.34	ng Cu/l	220.1
		Acid Extract (GCMS)	See Attach		625
		Base Neutral (GCMS)	See Attach		625
		Nickel	<0.05	ng Ni/l	249.1
		Lead (GTF)	0.065	ng Pb/l	239.2
		Zinc	0.849	ng Zn/l	289.1
1129624	12(1-12) 8/28/90c	Chromium	0.049	ng Cr/l	218.1
		Copper	1.85	ng Cu/l	220.1
		Acid Extract (GCMS)	See Attach		625
		Base Neutral (GCMS)	See Attach		625
		Nickel	1.10	ng Ni/l	249.1
		Lead (GTF)	0.34	ng Pb/l	239.2
		Zinc	0.737	ng Zn/l	289.1

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EAI LAB #1129621  
CLIENT CODE: CCP  
SAMPLE ID: 341-12) 8/28/90  
REPORT NO: 40327

Page 1

<u>SEMI-VOLATILES</u>	<u>Value</u>	<u>Units</u>
Aniline	50 U	ug/l
Phenol	50 U	ug/l
bis(2-chloroethyl)ether	50 U	ug/l
2-Chlorophenol	50 U	ug/l
1,3-Dichlorobenzene	50 U	ug/l
1,4-Dichlorobenzene	50 U	ug/l
Benzyl Alcohol	50 U	ug/l
1,2-Dichlorobenzene	50 U	ug/l
2-Methylphenol	50 U	ug/l
bis(2-chloroisopropyl)ether	50 U	ug/l
4-Methylphenol	50 U	ug/l
N-Nitroso-Di-propylamine	50 U	ug/l
Hexachloroethane	50 U	ug/l
Nitrobenzene	50 U	ug/l
Isophorone	50 U	ug/l
2-Nitrophenol	50 U	ug/l
2,4-Dimethylphenol	50 U	ug/l
bis(2-chloroethoxy)methane	50 U	ug/l
Benzoic Acid	250 U	ug/l
2,4-Dichlorophenol	50 U	ug/l
1,2,4-Trichlorobenzene	50 U	ug/l

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SAMPLE ID: 3(1-12) 8/28/90

<u>SEMI-VOLATILES</u>	<u>Value</u>	<u>Units</u>
4-Nitroaniline	250 U	ug/l
4,6-Dinitro-2-methylphenol	250 U	ug/l
N-Nitrosodiphenylamine	50 U	ug/l
4-Bromophenyl-phenyl ether	50 U	ug/l
Hexachlorobenzene	50 U	ug/l
Pentachlorophenol	250 U	ug/l
Phenanthrene	50 U	ug/l
Anthracene	50 U	ug/l
Di-N-Butylphthalate	50 U	ug/l
Fluoranthene	50 U	ug/l
Pyrene	50 U	ug/l
Butylbenzyl phthalate	50 U	ug/l
3,3'-Dichlorobensidine	100 U	ug/l
Chrysene	50 U	ug/l
bis(2-Ethylhexyl)phthalate	50 U	ug/l
Di-N-Octylphthalate	50 U	ug/l
Benzo(b)fluoranthene	50 U	ug/l
Benzo(k)fluoranthene	50 U	ug/l
Benzo(a)pyrene	50 U	ug/l
Indeno(1,2,3-c,d)pyrene	50 U	ug/l
Dibenzo(a,h)anthracene	50 U	ug/l
Benzo(g,h,i)perylene	50 U	ug/l
Benzo(a)anthracene	50 U	ug/l

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EAI LAB #1129622  
CLIENT CODE: CCP  
SAMPLE ID: 8(1-12) 8/28/90  
REPORT NO: 40327

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<u>SEMI-VOLATILES</u>	<u>Value</u>	<u>Units</u>
Aniline	10 U	ug/l
Phenol	10 U	ug/l
bis(2-chloroethyl)ether	10 U	ug/l
2-Chlorophenol	10 U	ug/l
1,3-Dichlorobenzene	10 U	ug/l
1,4-Dichlorobenzene	10 U	ug/l
Benzyl Alcohol	10 U	ug/l
1,2-Dichlorobenzene	10 U	ug/l
2-Methylphenol	10 U	ug/l
bis(2-chloroisopropyl)ether	10 U	ug/l
4-Methylphenol	10 U	ug/l
N-Nitroso-Di-propylamine	10 U	ug/l
Hexachloroethane	10 U	ug/l
Nitrobenzene	10 U	ug/l
Isophorone	10 U	ug/l
2-Nitrophenol	10 U	ug/l
2,4-Dimethylphenol	10 U	ug/l
bis(2-chloroethoxy)methane	10 U	ug/l
Benzoic Acid	50 U	ug/l
2,4-Dichlorophenol	10 U	ug/l
1,2,4-Trichlorobenzene	10 U	ug/l

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SAMPLE ID: 8(1-12) 8/28/90

<u>SEMI-VOLATILES</u>	<u>Value</u>	<u>Units</u>
4-Nitroaniline	50 U	ug/l
4,6-Dinitro-2-methylphenol	50 U	ug/l
N-Nitrosodiphenylamine	10 U	ug/l
4-Bromophenyl-phenyl ether	10 U	ug/l
Hexachlorobenzene	10 U	ug/l
Pentachlorophenol	50 U	ug/l
Phenanthrene	10 U	ug/l
Anthracene	10 U	ug/l
Di-N-Butylphthalate	10 U	ug/l
Fluoranthene	10 U	ug/l
Pyrene	10 U	ug/l
Butylbenzyl phthalate	10 U	ug/l
3,3'-Dichlorobenzidine	20 U	ug/l
Chrysene	10 U	ug/l
bis(2-Ethylhexyl)phthalate	10 U	ug/l
Di-N-Octylphthalate	10 U	ug/l
Benzo(b)fluoranthene	10 U	ug/l
Benzo(k)fluoranthene	10 U	ug/l
Benzo(a)pyrene	10 U	ug/l
Indeno(1,2,3-c,d)pyrene	10 U	ug/l
Dibenzo(a,h)anthracene	10 U	ug/l
Benzo(g,h,i)perylene	10 U	ug/l
Benzo(a)anthracene	10 U	ug/l

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EAI LAB #1129623  
CLIENT CODE: CCP  
SAMPLE ID: 9(1-12) 8/28/90  
REPORT NO: 40327

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<u>SEMI-VOLATILES</u>	<u>Value</u>	<u>Units</u>
Aniline	10 U	ug/l
Phenol	10 U	ug/l
bis(2-chloroethyl)ether	10 U	ug/l
2-Chlorophenol	10 U	ug/l
1,3-Dichlorobenzene	10 U	ug/l
1,4-Dichlorobenzene	10 U	ug/l
Benzyl Alcohol	10 U	ug/l
1,2-Dichlorobenzene	10 U	ug/l
2-Methylphenol	10 U	ug/l
bis(2-chloroisopropyl)ether	10 U	ug/l
4-Methylphenol	10 U	ug/l
N-Nitroso-Di-propylamine	10 U	ug/l
Hexachloroethane	10 U	ug/l
Nitrobenzene	10 U	ug/l
Isophorone	10 U	ug/l
2-Nitrophenol	10 U	ug/l
2,4-Dimethylphenol	10 U	ug/l
bis(2-chloroethoxy)methane	10 U	ug/l
Benzoic Acid	50 U	ug/l
2,4-Dichlorophenol	10 U	ug/l
1,2,4-Trichlorobenzene	10 U	ug/l

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SAMPLE ID: 9(1-12) 8/28/90

<u>SEMI-VOLATILES</u>	<u>Value</u>	<u>Units</u>
4-Nitroaniline	50 U	ug/l
4,6-Dinitro-2-methylphenol	50 U	ug/l
N-Nitrosodiphenylamine	10 U	ug/l
4-Bromophenyl-phenyl ether	10 U	ug/l
Hexachlorobenzene	10 U	ug/l
Pentachlorophenol	50 U	ug/l
Phenanthrene	10 U	ug/l
Anthracene	10 U	ug/l
Di-N-Butylphthalate	10 U	ug/l
Fluoranthene	10 U	ug/l
Pyrene	10 U	ug/l
Butylbenzyl phthalate	10 U	ug/l
3,3'-Dichlorobensidine	20 U	ug/l
Chrysene	10 U	ug/l
bis(2-Ethylhexyl)phthalate	10 U	ug/l
Di-N-Octylphthalate	10 U	ug/l
Benzo(b)fluoranthene	10 U	ug/l
Benzo(k)fluoranthene	10 U	ug/l
Benzo(a)pyrene	10 U	ug/l
Indeno(1,2,3-c,d)pyrene	10 U	ug/l
Dibenzo(a,h)anthracene	10 U	ug/l
Benzo(g,h,i)perylene	10 U	ug/l
Benzo(a)anthracene	10 U	ug/l

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EAI LAB #1129624  
CLIENT CODE: CCP  
SAMPLE ID: 12(1-12) 8/28/90  
REPORT NO: 40327

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<u>SEMI-VOLATILES</u>	<u>Value</u>	<u>Units</u>
Aniline	10 U	ug/l
Phenol	10 U	ug/l
bis(2-chloroethyl)ether	10 U	ug/l
2-Chlorophenol	10 U	ug/l
1,3-Dichlorobenzene	10 U	ug/l
1,4-Dichlorobenzene	10 U	ug/l
Benzyl Alcohol	10 U	ug/l
1,2-Dichlorobenzene	10 U	ug/l
2-Methylphenol	10 U	ug/l
bis(2-chloroisopropyl)ether	10 U	ug/l
4-Methylphenol	10 U	ug/l
N-Nitroso-Di-propylamine	10 U	ug/l
Hexachloroethane	10 U	ug/l
Nitrobensene	10 U	ug/l
Isophorone	10 U	ug/l
2-Nitrophenol	10 U	ug/l
2,4-Dimethylphenol	10 U	ug/l
bis(2-chloroethoxy)methane	10 U	ug/l
Benzoic Acid	50 U	ug/l
2,4-Dichlorophenol	10 U	ug/l
1,2,4-Trichlorobenzene	10 U	ug/l

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SAMPLE ID: 12(1-12) 8/28/90

<u>SEMI-VOLATILES</u>	<u>Value</u>	<u>Units</u>
4-Nitroaniline	50 U	ug/l
4,6-Dinitro-2-methylphenol	50 U	ug/l
N-Nitrosodiphenylamine	10 U	ug/l
4-Bromophenyl-phenyl ether	10 U	ug/l
Hexachlorobenzene	10 U	ug/l
Pentachlorophenol	50 U	ug/l
Phenanthrene	10 U	ug/l
Anthracene	10 U	ug/l
Di-N-Butylphthalate	10 U	ug/l
Fluoranthene	10 U	ug/l
Pyrene	10 U	ug/l
Butylbenzyl phthalate	10 U	ug/l
3,3'-Dichlorobensidine	20 U	ug/l
Chrysene	10 U	ug/l
bis(2-Ethylhexyl)phthalate	10 U	ug/l
Di-N-Octylphthalate	10 U	ug/l
Benzo(b)fluoranthene	10 U	ug/l
Benzo(k)fluoranthene	10 U	ug/l
Benzo(a)pyrene	10 U	ug/l
Indeno(1,2,3-c,d)pyrene	10 U	ug/l
Dibenzo(a,h)anthracene	10 U	ug/l
Benzo(g,h,i)perylene	10 U	ug/l
Benzo(a)anthracene	10 U	ug/l

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EAI LAB #1129625  
CLIENT CODE: CCP  
SAMPLE ID: 21(1-12) 8/28/90  
REPORT NO: 40327

Page 1

<u>SEMI-VOLATILES</u>	<u>Value</u>	<u>Units</u>
Aniline	10 U	ug/l
Phenol	10 U	ug/l
bis(2-chloroethyl)ether	10 U	ug/l
2-Chlorophenol	10 U	ug/l
1,3-Dichlorobenzene	10 U	ug/l
1,4-Dichlorobenzene	10 U	ug/l
Benzyl Alcohol	10 U	ug/l
1,2-Dichlorobenzene	10 U	ug/l
2-Methylphenol	10 U	ug/l
bis(2-chloroisopropyl)ether	10 U	ug/l
4-Methylphenol	10 U	ug/l
N-Nitroso-Di-propylamine	10 U	ug/l
Hexachloroethane	10 U	ug/l
Nitrobenzene	10 U	ug/l
Isophorone	10 U	ug/l
2-Nitrophenol	10 U	ug/l
2,4-Dimethylphenol	10 U	ug/l
bis(2-chloroethoxy)methane	10 U	ug/l
Benzoic Acid	50 U	ug/l
2,4-Dichlorophenol	10 U	ug/l
1,2,4-Trichlorobenzene	10 U	ug/l

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SAMPLE ID: 21(1-12) 8/28/90

<u>SEMI-VOLATILES</u>	<u>Value</u>	<u>Units</u>
4-Nitroaniline	50 U	ug/l
4,6-Dinitro-2-methylphenol	50 U	ug/l
N-Nitrosodiphenylamine	10 U	ug/l
4-Bromophenyl-phenyl ether	10 U	ug/l
Hexachlorobenzene	10 U	ug/l
Pentachlorophenol	50 U	ug/l
Phenanthrone	10 U	ug/l
Anthracene	10 U	ug/l
Di-N-Butylphthalate	10 U	ug/l
Fluoranthene	10 U	ug/l
Pyrene	10 U	ug/l
Butylbenzyl phthalate	10 U	ug/l
3,3'-Dichlorobensidine	20 U	ug/l
Chrysene	10 U	ug/l
bis(2-Ethylhexyl)phthalate	10 U	ug/l
Di-N-Octylphthalate	10 U	ug/l
Benzo(b)fluoranthene	10 U	ug/l
Benzo(k)fluoranthene	10 U	ug/l
Benzo(a)pyrene	10 U	ug/l
Indeno(1,2,3-c,d)pyrene	10 U	ug/l
Dibenzo(a,h)anthracene	10 U	ug/l
Benzo(g,h,i)perylene	10 U	ug/l
Benzo(a)anthracene	10 U	ug/l

CER 095251



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# Environmental Analysis, Inc.

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MR. J. GRANA  
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P.O. BOX 66808  
ST. LOUIS MO 63166

PAGE NO : 1  
REPORT NO : 40326  
DATE : 09/27/90  
P.O. No. : 92326

## REPORT OF ANALYSIS

SUBJECT : Analysis of water/wastewater/waste samples in accordance with EPA 600S; Methods for Chemical Analysis of Water and Wastes, 1983. Samples from PCR Waste water Project.

LOG NUMBER	SAMPLE DESCRIPTION
1129321	3-3 8/27/90 C
1129322	3-6 8/27/90 C
1129323	3-9 8/28/90 C
1129324	3-12 8/28/90 C
1129325	8-3 8/27/90 C
1129326	8-6 8/27/90 C
1129327	8-9 8/28/90 C
1129328	8-12 8/28/90 C
1129329	9-3 8/27/90 C
1129330	9-6 8/27/90 C
1129331	9-9 8/28/90 C
1129332	9-12 8/28/90 C
1129333	12-3 8/27/90 C
1129334	12-6 8/27/90 C
1129401	12-9 8/28/90 C
1129402	12-12 8/28/90 C
1129403	21-3 8/27/90 C
1129404	21-6 8/27/90 C
1129405	21-9 8/28/90 C
1129406	21-12 8/28/90 C

RESULTS OF ANALYSIS APPEAR ON FOLLOWING PAGES

RESPECTFULLY SUBMITTED

R. M. FERRIS

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PAGE NO : 3  
REPORT NO : 48326  
DATE : 09/27/98

## RESULTS OF ANALYSIS

LOG NUMBER	SAMPLE DESCRIPTION	TEST NAME	RESULTS OF ANALYSIS	UNITS OF EXPRESSION	METHOD NUMBER
1129329	9-3 8/27/98 c	Phenols	<0.005	mg/l	420.1
1129330	9-6 8/27/98 c	Volatiles (GCMS)	See Attach		624
		Oil & Grease	3.8	mg/l	413.1
		Phenols	18.008	mg/l	420.1
1129331	9-9 8/28/98 c	Volatiles (GCMS)	See Attach		624
		Oil & Grease	5.6	mg/l	413.1
		Phenols	0.008	mg/l	420.1
1129332	9-12 8/28/98 c	Volatiles (GCMS)	See Attach		624
		Oil & Grease	8.6	mg/l	413.1
		Phenols	<0.005	mg/l	420.1
1129333	12-3 8/27/98 c	Volatiles (GCMS)	See Attach		624
		Oil & Grease	467	mg/l	413.1
		Phenols	0.308	mg/l	420.1
1129334	12-6 8/27/98 c	Volatiles (GCMS)	See Attach		624
		Oil & Grease	177	mg/l	413.1
		Phenols	0.008	mg/l	420.1
1129401	12-9 8/28/98 c	Volatiles (GCMS)	See Attach		624
		Oil & Grease	558	mg/l	413.1
		Phenols	0.175	mg/l	420.1
1129402	12-12 8/28/98 c	Volatiles (GCMS)	See Attach		624
		Oil & Grease	295	mg/l	413.1
		Phenols	0.159	mg/l	420.1
1129403	21-3 8/27/98 c	Volatiles (GCMS)	See Attach		624
		Oil & Grease	6.9	mg/l	413.1
		Phenols	<0.005	mg/l	420.1
1129404	21-6 8/27/98 c	Volatiles (GCMS)	See attach		624

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EAI LAB #1129321  
CLIENT CODE: SCP  
SAMPLE ID: 3-3 8/27/90  
REPORT NO: 40326

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
Chloromethane	10 U	ug/l
Bromomethane	10 U	ug/l
Vinyl Chloride	10 U	ug/l
Chloroethane	10 U	ug/l
Methylene Chloride	5 U	ug/l
Acetone	50 U	ug/l
Carbon Disulfide	50 U	ug/l
1,1-Dichloroethene	5 U	ug/l
1,1-Dichloroethane	23	ug/l
1,2-Dichloroethene (total)	5 U	ug/l
Chloroform	21	ug/l
2-Butanone	50 U	ug/l
1,2-Dichloroethane	5 U	ug/l
1,1,1-Trichloroethane	650	ug/l
Carbon Tetrachloride	5 U	ug/l
Vinyl Acetate	50 U	ug/l
Bromodichloromethane	5 U	ug/l
1,2-Dichloropropene	5 U	ug/l
trans-1,3-Dichloropropene	5 U	ug/l
Trichloroethene	19	ug/l
Benzene	5 U	ug/l
Dibromochloromethane	5 U	ug/l

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Page 3

SAMPLE ID: 5-3 8/27/90

## VOLATILES

B=Analyte found in blank as well as sample, indicates possible blank contamination.

J=Estimated value-result is less than detection limit but greater than zero.

U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

R=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.

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Page 2

SAMPLE ID: 3-S 8/27/90

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
cis-1,3-Dichloropropene	5 U	ug/l
1,1,2-Trichloroethane	5 U	ug/l
Bromoform	5 U	ug/l
2-Hexanone	50 U	ug/l
4-Methyl-2-pentanone	50 U	ug/l
Tetrachloroethene	5 U	ug/l
1,1,2,2-Tetrachloroethane	5 U	ug/l
Toluene	8	ug/l
Chlorobenzene	5 U	ug/l
Ethyl Benzene	5 U	ug/l
Styrene	5 U	ug/l
Total Xylenes	5 U	ug/l
Acrolein	100 U	ug/l
Acrylonitrile	50 U	ug/l
2-Chloroethylvinylether	10 U	ug/l

Surrogate recoveries	% Rec	Control Range	
		Water %	Soil %
d4-1,2-Dichloroethane	79	(76-114)	(70-121)
d8-Toluene	102	(88-110)	(81-117)
4-Bromofluorobenzene	92	(86-115)	(74-121)

CER 095261



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EAI LAB #1129323  
CLIENT CODE: CCP  
SAMPLE ID: 3-9 8/28/90  
REPORT NO: 40326

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
Chloromethane	10 U	ug/l
Bromomethane	10 U	ug/l
Vinyl Chloride	10 U	ug/l
Chloroethane	10 U	ug/l
Methylene Chloride	5 U	ug/l
Acetone	50 U	ug/l
Carbon Disulfide	50 U	ug/l
1,1-Dichloroethene	5 U	ug/l
1,1-Dichloroethane	19	ug/l
1,2-Dichloroethene (total)	5 U	ug/l
Chloroform	17	ug/l
2-Butanone	50 U	ug/l
1,2-Dichloroethane	5 U	ug/l
1,1,1-Trichloroethane	430	ug/l
Carbon Tetrachloride	5 U	ug/l
Vinyl Acetate	50 U	ug/l
Bromodichloromethane	5 U	ug/l
1,2-Dichloropropane	5 U	ug/l
trans-1,3-Dichloropropene	5 U	ug/l
Trichloroethene	20	ug/l
Benzene	5 U	ug/l
Dibromochloromethane	5 U	ug/l

CER 095263



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Page 3

SAMPLE ID: 3-9 8/28/90

## VOLATILES

B=Analyte found in blank as well as sample, indicates possible blank contamination.

J=Estimated value-result is less than detection limit but greater than zero.

U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

E=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.

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7/1/1997



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Page 2

SAMPLE ID: 3-12-8/28/90

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
cis-1,3-Dichloropropene	5 U	ug/l
1,1,2-Trichloroethane	5 U	ug/l
Bromoform	5 U	ug/l
2-Hexanone	50 U	ug/l
4-Methyl-2-pentanone	50 U	ug/l
Tetrachloroethene	5 U	ug/l
1,1,2,2-Tetrachloroethane	5 U	ug/l
Toluene	10	ug/l
Chlorobenzene	5 U	ug/l
Ethyl Benzene	5 U	ug/l
Styrene	5 U	ug/l
Total Xylenes	5 U	ug/l
Acrolein	100 U	ug/l
Acrylonitrile	50 U	ug/l
2-Chloroethylvinylether	10 U	ug/l

Surrogate recoveries	% Rec	Control Range
		Water %      Soil %
d4-1,2-Dichloroethane	80	(76-114)      (70-121)
d8-Toluene	100	(88-110)      (81-117)
4-Bromofluorobenzene	88	(86-116)      (74-121)

CER 095267



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EAI LAB #1129325  
CLIENT CODE: CEP  
SAMPLE ID: 8-3 8/27/90  
REPORT NO: 40326

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
Chloromethane	10 U	ug/l
Bromomethane	10 U	ug/l
Vinyl Chloride	10 U	ug/l
Chloroethane	10 U	ug/l
Methylene Chloride	15	ug/l
Acetone	50 U	ug/l
Carbon Disulfide	50 U	ug/l
1,1-Dichloroethene	5 U	ug/l
1,1-Dichloroethane	5 U	ug/l
1,2-Dichloroethene (total)	5 U	ug/l
Chloroform	18	ug/l
2-Butanone	50 U	ug/l
1,2-Dichloroethane	5 U	ug/l
1,1,1-Trichloroethane	13	ug/l
Carbon Tetrachloride	8	ug/l
Vinyl Acetate	50 U	ug/l
Bromodichloromethane	5 U	ug/l
1,2-Dichloropropane	5 U	ug/l
trans-1,3-Dichloropropene	5 U	ug/l
Trichloroethene	5 U	ug/l
Benzene	5 U	ug/l
Dibromochloromethane	5 U	ug/l

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SAMPLE ID: 8-1 8/27/90

## VOLATILES

B=Analyte found in blank as well as sample, indicates possible blank contamination.

J=Estimated value-result is less than detection limit but greater than zero.

U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

E=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.

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SAMPLE ID: 8-6 8/27/90

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
cis-1,3-Dichloropropene	5 U	ug/l
1,1,2-Trichloroethane	5 U	ug/l
Bromoform	5 U	ug/l
2-Hexanone	50 U	ug/l
4-Methyl-2-pentanone	50 U	ug/l
Tetrachloroethene	5 U	ug/l
1,1,2,2-Tetrachloroethane	5 U	ug/l
Toluene	8	ug/l
Chlorobenzene	5 U	ug/l
Ethyl Benzene	5 U	ug/l
Styrene	5 U	ug/l
Total Xylenes	5 U	ug/l
Acrolein	100 U	ug/l
Acrylonitrile	50 U	ug/l
2-Chloroethylvinylether	10 U	ug/l

Surrogate recoveries	% Rec	Control Range	
		Water %	Soil %
d4-1,2-Dichloroethane	84	(76-114)	(70-121)
d8-Toluene	102	(88-110)	(81-117)
4-Bromofluorobenzene	89	(86-115)	(74-121)

CER 095273



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EAI LAB #1129327  
CLIENT CODE: CCP  
SAMPLE ID: 8-9 8/28/90  
REPORT NO: 40326

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
Chloromethane	10 U	ug/l
Bromomethane	10 U	ug/l
Vinyl Chloride	10 U	ug/l
Chloroethane	10 U	ug/l
Methylene Chloride	14 B*	ug/l
Acetone	50 U	ug/l
Carbon Disulfide	50 U	ug/l
1,1-Dichloroethene	5 U	ug/l
1,1-Dichloroethane	5 U	ug/l
1,2-Dichloroethene (total)	5 U	ug/l
Chloroform	7	ug/l
2-Butanone	50 U	ug/l
1,2-Dichloroethane	5 U	ug/l
1,1,1-Trichloroethane	5 U	ug/l
Carbon Tetrachloride	6	ug/l
Vinyl Acetate	50 U	ug/l
Bromodichloromethane	5 U	ug/l
1,2-Dichloropropene	5 U	ug/l
trans-1,3-Dichloropropene	5 U	ug/l
Trichloroethene	5 U	ug/l
Benzene	5 U	ug/l
Dibromochloromethane	5 U	ug/l

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8/28/90



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Page 3

SAMPLE ID: 8-9 8/28/90

## VOLATILES

B=Analyte found in blank as well as sample, indicates possible blank contamination.

J=Estimated value-result is less than detection limit but greater than zero.

U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

E=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.

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Page 2

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SAMPLE ID: 8-12 8/28/90

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
cis-1,3-Dichloropropene	5 U	ug/l
1,1,2-Trichloroethane	5 U	ug/l
Bromoform	5 U	ug/l
2-Hexanone	50 U	ug/l
4-Methyl-2-pentanone	50 U	ug/l
Tetrachloroethene	5 U	ug/l
1,1,2,2-Tetrachloroethane	5 U	ug/l
Toluene	5 U	ug/l
Chlorobenzene	5 U	ug/l
Ethyl Benzene	5 U	ug/l
Styrene	5 U	ug/l
Total Xylenes	5 U	ug/l
Acrolein	100 U	ug/l
Acrylonitrile	50 U	ug/l
2-Chloroethylvinylether	10 U	ug/l

\* This blank contained 12 ug/l of Methylene Chloride.

Surrogate recoveries	% Rec	Control Range
		Water %      Soil %
d4-1,2-Dichloroethane	82	(76-114)      (70-121)
d8-Toluene	89	(88-110)      (81-117)
4-Bromofluorobenzene	87	(86-115)      (74-121)

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EAI LAB #1129329  
 CLIENT CODE: CCP  
 SAMPLE ID: 9-3 8/27/90  
 REPORT NO: 40326

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
Chloromethane	10 U	ug/l
Bromomethane	10 U	ug/l
Vinyl Chloride	10 U	ug/l
Chloroethane	10 U	ug/l
Methylene Chloride	13	ug/l
Acetone	50 U	ug/l
Carbon Disulfide	50 U	ug/l
1,1-Dichloroethene	5 U	ug/l
1,1-Dichloroethane	5 U	ug/l
1,2-Dichloroethene (total)	5 U	ug/l
Chloroform	20	ug/l
2-Butanone	50 U	ug/l
1,2-Dichloroethane	5 U	ug/l
1,1,1-Trichloroethane	5 U	ug/l
Carbon Tetrachloride	5 U	ug/l
Vinyl Acetate	50 U	ug/l
Bromodichloromethane	5 U	ug/l
1,2-Dichloropropane	5 U	ug/l
trans-1,3-Dichloropropene	5 U	ug/l
Trichloroethene	5 U	ug/l
Benzene	5 U	ug/l
Dibromo-chloromethane	5 U	ug/l

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Page 3

SAMPLE ID: 9-3 8/27/90

## VOLATILES

B=Analyte found in blank as well as sample, indicates possible blank contamination.

J=Estimated value-result is less than detection limit but greater than zero.

U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

E=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.

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Page 2

SAMPLE ID: 9-6 8/27/90

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
cis-1,3-Dichloropropene	5 U	ug/l
1,1,2-Trichloroethane	5 U	ug/l
Bromoform	5 U	ug/l
2-Hexanone	50 U	ug/l
4-Methyl-2-pentanone	50 U	ug/l
Tetrachloroethene	5 U	ug/l
1,1,2,2-Tetrachloroethane	5 U	ug/l
Toluene	5 U	ug/l
Chlorobenzene	5 U	ug/l
Ethyl Benzene	5 U	ug/l
Styrene	5 U	ug/l
Total Xylenes	5 U	ug/l
Acrolein	100 U	ug/l
Acrylonitrile	50 U	ug/l
2-Chloroethylvinylether	10 U	ug/l

\* This blank contained 12 ug/l of Methylene Chloride.

Surrogate recoveries	% Rec	Control Range
		Water % Soil %
d4-1,2-Dichloroethane	87	(76-114) (70-121)
d8-Toluene	92	(88-110) (81-117)
4-Bromofluorobenzene	85	(86-115) (74-121)

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EAI LAB #1129331  
CLIENT CODE: CCP  
SAMPLE ID: 9-9 8/28/90  
REPORT NO: 40326

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
Chloromethane	10 U	ug/l
Bromomethane	10 U	ug/l
Vinyl Chloride	10 U	ug/l
Chloroethane	10 U	ug/l
Methylene Chloride	16 B*	ug/l
Acetone	50 U	ug/l
Carbon Disulfide	50 U	ug/l
1,1-Dichloroethene	5 U	ug/l
1,1-Dichloroethane	5 U	ug/l
1,2-Dichloroethene (total)	5 U	ug/l
Chloroform	22	ug/l
2-Butanone	50 U	ug/l
1,2-Dichloroethane	5 U	ug/l
1,1,1-Trichloroethane	5 U	ug/l
Carbon Tetrachloride	5 U	ug/l
Vinyl Acetate	50 U	ug/l
Bromodichloromethane	5 U	ug/l
1,2-Dichloropropene	5 U	ug/l
trans-1,3-Dichloropropene	5 U	ug/l
Trichloroethene	5 U	ug/l
Benzene	5 U	ug/l
Dibromochloromethane	11	ug/l

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Page 3

SAMPLE ID: 9-9 8/28/90

## VOLATILES

B=Analyte found in blank as well as sample, indicates possible blank contamination.

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E=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.

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Page 2

SAMPLE ID: 9-12 8/28/90

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
cis-1,3-Dichloropropene	5 U	ug/l
1,1,2-Trichloroethane	5 U	ug/l
Bromoform	5 U	ug/l
2-Hexanone	50 U	ug/l
4-Methyl-2-pentanone	50 U	ug/l
Tetrachloroethene	5 U	ug/l
1,1,2,2-Tetrachloroethane	5 U	ug/l
Toluene	5 U	ug/l
Chlorobenzene	5 U	ug/l
Ethyl Benzene	5 U	ug/l
Styrene	5 U	ug/l
Total Xylenes	5 U	ug/l
Acrolein	100 U	ug/l
Acrylonitrile	50 U	ug/l
2-Chloroethylvinylether	10 U	ug/l

Surrogate recoveries	% Rec	Control Range
		Water %      Soil %
d4-1,2-Dichloroethane	78	(76-114)      (70-121)
d8-Toluene	87	(88-110)      (81-117)
4-Bromofluorobenzene	82	(86-115)      (74-121)

CER 095291



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EAI LAB #1129333  
CLIENT CODE: CCP  
SAMPLE ID: 12-3 8/27/90  
REPORT NO: 40326

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
Chloromethane	10 U	ug/l
Bromomethane	10 U	ug/l
Vinyl Chloride	10 U	ug/l
Chloroethane	10 U	ug/l
Methylene Chloride	15 B*	ug/l
Acetone	50 U	ug/l
Carbon Disulfide	50 U	ug/l
1,1-Dichloroethene	5 U	ug/l
1,1-Dichloroethane	5 U	ug/l
1,2-Dichloroethene (total)	5 U	ug/l
Chloroform	14	ug/l
2-Butanone	50 U	ug/l
1,2-Dichloroethane	5 U	ug/l
1,1,1-Trichloroethane	40	ug/l
Carbon Tetrachloride	15	ug/l
Vinyl Acetate	50 U	ug/l
Bromodichloromethane	5 U	ug/l
1,2-Dichloropropene	5 U	ug/l
trans-1,3-Dichloropropene	5 U	ug/l
Trichloroethene	29	ug/l
Benzene	5 U	ug/l
Dibromochloromethane	5 U	ug/l

CER 095293



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SAMPLE ID: 12-3 8/27/90

## VOLATILES

B=Analyte found in blank as well as sample, indicates possible blank contamination.

J=Estimated value-result is less than detection limit but greater than zero.

U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

E=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.

CER 095295



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Page 2

SAMPLE ID: 12-6 8/27/90

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
cis-1,3-Dichloropropene	5 U	ug/l
1,1,2-Trichloroethane	5 U	ug/l
Bromoform	5 U	ug/l
2-Hexanone	50 U	ug/l
4-Methyl-2-pentanone	50 U	ug/l
Tetrachloroethene	5 U	ug/l
1,1,2,2-Tetrachloroethane	5 U	ug/l
Toluene	5 U	ug/l
Chlorobenzene	5 U	ug/l
Ethyl Benzene	5 U	ug/l
Styrene	5 U	ug/l
Total Xylenes	5 U	ug/l
Acrolein	100 U	ug/l
Acrylonitrile	50 U	ug/l
2-Chloroethylvinylether	10 U	ug/l

\* The blank contained 12 ug/l of Methylene Chloride.

Surrogate recoveries	% Rec	Control Range	
		Water %	Soil %
d4-1,2-Dichloroethane	84	(76-114)	(70-121)
d8-Toluene	94	(88-110)	(81-117)
4-Bromofluorobenzene	86	(86-115)	(74-121)

CER 095297



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EAI LAB #1129401  
CLIENT CODE: CCP  
SAMPLE ID: 12-9 8/28/90  
REPORT NO: 40326

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
Chloromethane	10 U	ug/l
Bromomethane	10 U	ug/l
Vinyl Chloride	10 U	ug/l
Chloroethane	10 U	ug/l
Methylene Chloride	13 B*	ug/l
Acetone	50 U	ug/l
Carbon Disulfide	50 U	ug/l
1,1-Dichloroethene	5 U	ug/l
1,1-Dichloroethane	5 U	ug/l
1,2-Dichloroethene (total)	5 U	ug/l
Chloroform	8	ug/l
2-Butanone	50 U	ug/l
1,2-Dichloroethane	5 U	ug/l
1,1,1-Trichloroethane	34	ug/l
Carbon Tetrachloride	5 U	ug/l
Vinyl Acetate	50 U	ug/l
Bromodichloromethane	5 U	ug/l
1,2-Dichloropropane	5 U	ug/l
trans-1,3-Dichloropropene	5 U	ug/l
Trichloroethene	28	ug/l
Benzene	5 U	ug/l
Dibromochloromethane	5 U	ug/l

CER 095299

1129401



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Page 3

SAMPLE ID: 12-9 8/27/90

## VOLATILES

B=Analyte found in blank as well as sample, indicates possible blank contamination.

J=Estimated value-result is less than detection limit but greater than zero.

U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

E=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.

CER 095301



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Page 2

SAMPLE ID: 12-12-8/28/90

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
cis-1,3-Dichloropropene	5 U	ug/l
1,1,2-Trichloroethane	5 U	ug/l
Bromoform	5 U	ug/l
2-Hexanone	50 U	ug/l
4-Methyl-2-pentanone	50 U	ug/l
Tetrachloroethene	5 U	ug/l
1,1,2,2-Tetrachloroethane	5 U	ug/l
Toluene	5 U	ug/l
Chlorobenzene	5 U	ug/l
Ethyl Benzene	5 U	ug/l
Styrene	5 U	ug/l
Total Xylenes	5 U	ug/l
Acrolein	100 U	ug/l
Acrylonitrile	50 U	ug/l
2-Chloroethylvinylether	10 U	ug/l

\* The blank contained 12 ug/l of Methylene Chloride.

Surrogate recoveries	% Rec	Control Range	
		Water %	Soil %
d4-1,2-Dichloroethane	80	(76-114)	(70-121)
d8-Toluene	89	(88-110)	(81-117)
4-Bromofluorobenzene	85	(86-115)	(74-121)

CER 095303



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EAI LAB #1129403  
CLIENT CODE: CCP  
SAMPLE ID: 21-3 8/27/90  
REPORT NO: 40326

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
Chloromethane	10 U	ug/l
Bromomethane	10 U	ug/l
Vinyl Chloride	10 U	ug/l
Chloroethane	10 U	ug/l
Methylene Chloride	13	ug/l
Acetone	50 U	ug/l
Carbon Disulfide	50 U	ug/l
1,1-Dichloroethene	5 U	ug/l
1,1-Dichloroethane	12	ug/l
1,2-Dichloroethene (total)	5 U	ug/l
Chloroform	8	ug/l
2-Butanone	50 U	ug/l
1,2-Dichloroethane	5 U	ug/l
1,1,1-Trichloroethane	600	ug/l
Carbon Tetrachloride	5 U	ug/l
Vinyl Acetate	50 U	ug/l
Bromodichloromethane	7	ug/l
1,2-Dichloropropane	5 U	ug/l
trans-1,3-Dichloropropene	5 U	ug/l
Trichloroethene	16	ug/l
Benzene	5 U	ug/l
Dibromochloromethane	5 U	ug/l

CER 095305



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Page 3

SAMPLE ID: 21-3 8/27/90

## VOLATILES

B=Analyte found in blank as well as sample, indicates possible blank contamination.

J=Estimated value-result is less than detection limit but greater than zero.

U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

E=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.

CER 095307



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Page 2

SAMPLE ID: 21-6 8/27/90

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
cis-1,3-Dichloropropene	5 U	ug/l
1,1,2-Trichloroethane	5 U	ug/l
Bromoform	5 U	ug/l
2-Hexanone	50 U	ug/l
4-Methyl-2-pentanone	50 U	ug/l
Tetrachloroethene	5 U	ug/l
1,1,2,2-Tetrachloroethane	5 U	ug/l
Toluene	5 U	ug/l
Chlorobenzene	5 U	ug/l
Ethyl Benzene	5 U	ug/l
Styrene	5 U	ug/l
Total Xylenes	5 U	ug/l
Acrolein	100 U	ug/l
Acrylonitrile	50 U	ug/l
2-Chloroethylvinylether	10 U	ug/l

<u>Surrogate recoveries</u>	<u>% Rec</u>	<u>Control Range</u>
		Water %      Soil %
d4-1,2-Dichloroethane	76	(76-114)      (70-121)
d8-Toluene	93	(88-110)      (81-117)
4-Bromofluorobenzene	86	(86-115)      (74-121)

CER 095309

8/27/90



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EAI LAB #1129405  
CLIENT CODE: CCP  
SAMPLE ID: 21-9 8/28/90  
REPORT NO: 40326

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
Chloromethane	10 U	ug/l
Bromomethane	10 U	ug/l
Vinyl Chloride	10 U	ug/l
Chloroethane	10 U	ug/l
Methylene Chloride	20	ug/l
Acetone	50 U	ug/l
Carbon Disulfide	50 U	ug/l
1,1-Dichloroethene	5 U	ug/l
1,1-Dichloroethane	5 U	ug/l
1,2-Dichloroethene (total)	5 U	ug/l
Chloroform	14	ug/l
2-Butanone	50 U	ug/l
1,2-Dichloroethane	5 U	ug/l
1,1,1-Trichloroethane	140	ug/l
Carbon Tetrachloride	5 U	ug/l
Vinyl Acetate	50 U	ug/l
Bromodichloromethane	5 U	ug/l
1,2-Dichloropropane	5 U	ug/l
trans-1,3-Dichloropropene	5 U	ug/l
Trichloroethene	5 U	ug/l
Benzene	5 U	ug/l
Dibromochloromethane	5 U	ug/l

CER 095311



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Page 3

SAMPLE ID: 21-9 8/28/90

## VOLATILES

B=Analyte found in blank as well as sample, indicates possible blank contamination.

J=Estimated value-result is less than detection limit but greater than zero.

U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

E=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.

CER 095313



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SAMPLE ID: 21-12 8/28/90

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
cis-1,3-Dichloropropene	5 U	ug/l
1,1,2-Trichloroethane	5 U	ug/l
Bromoform	5 U	ug/l
2-Hexanone	50 U	ug/l
4-Methyl-2-pentanone	50 U	ug/l
Tetrachloroethene	5 U	ug/l
1,1,2,2-Tetrachloroethane	5 U	ug/l
Toluene	5 U	ug/l
Chlorobenzene	5 U	ug/l
Ethyl Benzene	5 U	ug/l
Styrene	5 U	ug/l
Total Xylenes	5 U	ug/l
Acrolein	100 U	ug/l
Acrylonitrile	50 U	ug/l
2-Chloroethylvinylether	10 U	ug/l

<u>Surrogate recoveries</u>	<u>% Rec</u>	<u>Control Range</u>	
		<u>Water %</u>	<u>Soil %</u>
d4-1,2-Dichloroethane	101	(76-114)	(70-121)
d8-Toluene	85	(88-110)	(81-117)
4-Bromofluorobenzene	96	(86-115)	(74-121)

CER 095315



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MR. J. GRANA  
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P.O.BOX 66800  
ST. LOUIS MO 63168

PAGE NO : 1  
REPORT NO : 40331A  
DATE : 09/28/90  
P.O. NO : 92320

## REPORT OF ANALYSIS

SUBJECT : Analysis of water/wastewater/waste samples in accordance with EPA-600; Methods for Chemical Analysis of Water and Wastes, 1983. Samples from PCR Wastewater Project.

LOG NUMBER  
1129806

SAMPLE DESCRIPTION  
SITE 31 8/27/90

RESULT OF ANALYSIS APPEAR ON FOLLOWING PAGES

RESPECTFULLY SUBMITTED



R.W. FERRIS

CER 095317



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EAI LAB #1129806  
CLIENT CODE: CCP  
SAMPLE ID: SITE 31 8/27/90  
REPORT NO: 40331 A

Page 1

<u>SEMI-VOLATILES</u>	<u>Value</u>	<u>Units</u>
Aniline	50 U	ug/l
Phenol	50 U	ug/l
bis(2-chloroethyl)ether	50 U	ug/l
2-Chlorophenol	50 U	ug/l
1,3-Dichlorobenzene	50 U	ug/l
1,4-Dichlorobenzene	50 U	ug/l
Benzyl Alcohol	50 U	ug/l
1,2-Dichlorobenzene	50 U	ug/l
2-Methylphenol	50 U	ug/l
bis(2-chloroisopropyl)ether	50 U	ug/l
4-Methylphenol	50 U	ug/l
N-Nitroso-Di-propylamine	50 U	ug/l
Hexachloroethane	50 U	ug/l
Nitrobenzene	50 U	ug/l
Isophorone	50 U	ug/l
2-Nitrophenol	50 U	ug/l
2,4-Dimethylphenol	50 U	ug/l
bis(2-chloroethoxy)methane	50 U	ug/l
Benzoic Acid	250 U	ug/l
2,4-Dichlorophenol	50 U	ug/l
1,2,4-Trichlorobenzene	50 U	ug/l

CER 095319

1329806



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Page 3

SAMPLE ID: SITE 31 8/27/90

<u>SEMI-VOLATILES</u>	<u>Value</u>	<u>Units</u>
4-Nitroaniline	250 U	ug/l
4,6-Dinitro-2-methylphenol	250 U	ug/l
N-Nitrosodiphenylamine	50 U	ug/l
4-Bromophenyl-phenyl ether	50 U	ug/l
Hexachlorobenzene	50 U	ug/l
Pentachlorophenol	250 U	ug/l
Phenanthrene	50 U	ug/l
Anthracene	50 U	ug/l
Di-N-Butylphthalate	50 U	ug/l
Fluoranthene	50 U	ug/l
Pyrene	50 U	ug/l
Butylbenzyl phthalate	50 U	ug/l
3,3'-Dichlorobensidine	100 U	ug/l
Chrysene	50 U	ug/l
bis(2-Ethylhexyl)phthalate	60 U	ug/l
Di-N-Octylphthalate	50 U	ug/l
Benzo(b)fluoranthene	50 U	ug/l
Benzo(k)fluoranthene	50 U	ug/l
Benzo(a)pyrene	50 U	ug/l
Indeno(1,2,3-c,d)pyrene	50 U	ug/l
Dibenzo(a,h)anthracene	50 U	ug/l
Benzo(g,h,i)perylene	50 U	ug/l
Benzo(a)anthracene	50 U	ug/l

CER 095321

U7RJ(MH4)



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EAI LAB #1129806  
CLIENT CODE: CCP  
SAMPLE ID: SITE 31 8/27/90  
REPORT NO:

<u>VOLATILES</u>	<u>Value</u>	<u>Units</u>
Chloromethane	10 U	ug/l
Bromomethane	10 U	ug/l
Vinyl Chloride	10 U	ug/l
Chloroethane	10 U	ug/l
Methylene Chloride	5 U	ug/l
Acetone	50 U	ug/l
Carbon Disulfide	50 U	ug/l
1,1-Dichloroethene	5 U	ug/l
1,1-Dichloroethane	5 U	ug/l
1,2-Dichloroethene (total)	5 U	ug/l
Chloroform	9	ug/l
2-Butanone	50 U	ug/l
1,2-Dichloroethane	5 U	ug/l
1,1,1-Trichloroethane	5 U	ug/l
Carbon Tetrachloride	5 U	ug/l
Vinyl Acetate	50 U	ug/l
Bromodichloromethane	5 U	ug/l
1,2-Dichloropropene	5 U	ug/l
trans-1,3-Dichloropropene	5 U	ug/l
Trichloroethene	5 U	ug/l
Benzene	5 U	ug/l
Dibromochloromethane	5 U	ug/l

CER 095323



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Page 3

SAMPLE ID: SITE 31 8/27/90

## VOLATILES

B=Analyte found in blank as well as sample, indicates possible blank contamination.

J=Estimated value-result is less than detection limit but greater than zero.

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E=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.

CER 095325



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